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## CURRENT LITERATURE.

*Pittonia*, Vol. i, part 2. A series of botanical papers by Edward L. Greene, July, 1887, pp. 51-93.

When the first part of *Pittonia* appeared the question as to the meaning of the name was raised. This has called forth an explanation in the part before us, which explains that an easy name was sought, to be used in quoting, and so the family name of Tournefort was chosen. Two new genera of Borraginaceæ are proposed, *Oreocarya*, to include *Krynitzkia* & *Pseudokrynitzkia* and part of *Pterygium* in Gray's Syn. Fl. Suppl.; and *Eremocarya*, to include *Krynitzkia micrantha* of Gray, and the var. *lepidota*. The *Piptocalyx* of *Krynitzkia* is restored to generic rank. Among miscellaneous species, new or rare, about twenty new ones are described. The part closes with an account of an excursion to the island of San Miguel, and a catalogue of its flowering plants.

*Untersuchungen über Bau und Lebensgeschichte der Hirschtrüffel, Elaphomyces*, von Dr. Max Rees und Dr. C. Fisch. Bibliotheca Botanica, Heft 7, quarto, pp. 24, pl. 1. Cassel, Theodor Fischer, 1887.

The obscure life history of truffles has received additional treatment by the authors, who corroborate the constant limitation of species of *Elaphomyces* to soil permeated by the roots of trees—according to their observation, pines—that are closely invested and parasitically attached by the growing mycelium, which matures its fruit only when in the most intimate connection with the abnormally branched rootlets. The connection between mycelium and roots appears to be simply that of a parasite with its host, and not a case of true symbiosis. Although plants were examined in large numbers, and in all stages of development, no trace of fertilization was observed, so that the fruit appears to be strictly non-sexual, as in the pileate fungi; but this retrogression has progressed further than in the latter, for many of the fruits fail to mature, and, though produced in myriads, the spores seem to have entirely lost the power of germination, and propagation is only known to be effected by the spreading of mycelial fibers from root to root.

*Lectures on the Physiology of Plants*. By Julius von Sachs; translated by H. Marshall Ward, M. A., F. L. S. Roy. 8°, pp. xv, 836; wood cuts 455. Clarendon Press, Oxford, 1887. (New York: Macmillan & Co.)

Again we are indebted to the Clarendon Press for an important aid to English speaking students of plant physiology. Sachs' admirable "Vorlesungen über Pflanzen-physiologie," issued in 1882, has been turned into excellent English by Prof. Ward, and thus added to the list of books essential to the working library of our laboratories. However much it is to be regretted, it is a fact that our American students can not make ready use of German books, and a translation is always welcome; particularly such a book as this, in which, in lecture form, the author sets forth

his own special views on physiology. Sometimes this personal treatment runs almost into egotism, though much is to be forgiven to one who has made such extensive and profound additions to our knowledge as Dr. Sachs. There is hardly an important topic upon which his researches have not cast much light, and for a large number of principles he justly claims priority.

But this work appeals not alone to the special student of plant physiology. It can be read by any person fairly well informed as to plant structure and the principles of chemistry and physics, and deserves as wide a circle of readers in its English form as it has had in Europe in its original German. To this the most admirable work of the translator commends it. We have him to thank also for the greatly extended index, an important part of a book, to which our German friends would do well to take better heed. We say nothing of the treatment of the work, taking it for granted that most teachers are already familiar with it, and that all who are not will at once obtain the new edition. The *imprimatur* of the Clarendon Press is a guarantee of the excellence of the typography. The volume is uniform with the recently issued Goebel's "Outlines of Classification," which is supplementary to it. With Goodale's, Vines' and Sachs' physiologies, English students have for the present a pretty full epitome of the functions of plants.

*List of Works on North American Fungi*, with the exception of Schizomycetes, published before 1887. By W. G. Farlow and William Trelease. Library of Harvard Univ.; Cambridge, 1887. 8°, pp. 36.

This reference catalogue, in its complete form, makes No. 25 of the Bibliographical Contributions of the Harvard library. It comes as a great boon to all students working upon the American fungal flora. Much of its value lies in the remarkable completeness and accuracy with which references to all independent works, articles, or incidental mention of American fungi, having scientific value, have been collated. Yet it is not supposed the list is perfect, and botanists will do their fellows, as well as the authors, good service by reporting omissions and corrections. A most difficult feature of the work has been to justly discriminate between articles having a modicum of scientific value and those which are simply popular, which would on the one hand make the list imperfect if omitted, and on the other lumber it with useless references if included. We think the judgment of the compilers in this regard will not often be called in question.

The list includes about 650 numbers, some dozen of which are titles of journals, government reports, etc., and the remainder are titles of papers by 110 American and 73 foreign authors. Many of these works possess value in this connection by reason of a few paragraphs, subordinate statements, or mention of a few species—important matters to the investigator, and except for such an index most difficult to find. The list serves to correct a very prevalent misconception—an idea that the liter-

ature pertaining to American fungi is small and easily collected, and will also tend to set on their guard those who, with imperfect knowledge, rush into print with descriptions of supposed new species.

Over half the entries are the writings of fifteen authors, each of whom has contributed ten or more entries each. Two-fifths of these are foreigners, viz.: Fries 11 entries, Von Thümen 11, Winter 12, Saccardo 13, Berkeley 30 and Cooke 71, total 148 entries; while three-fifths are Americans, viz.: Arthur 10 entries, Bessey 11, Leidy 11 (all pertaining to fungi parasitic on animals), Gerard and Trelease 12 each, Burrill 17, Farlow 31, Peck 40 and Ellis 50, total 194 entries.

The slight biographical item of dates of birth, and in some cases of death appended to each author's name (with 43 exceptions) has its value. It brings out the interesting fact that over one-fourth of the American writers enumerated (excluding the twenty four names without data) were born either during or since 1850, and constitute 35 per cent. of those living at the beginning of the present year. They are also represented in the list of chief writers mentioned above. The large percentage of young investigators obviously promises an accelerated development of this field of science. Only four foreign writers occur whose births do not antedate 1850, of whom Bagnis, now dead, Pirota and Voglino are Italians, and Rostafinski a Pole.

Other interesting statistics might be gleaned from this list, but space forbids. A supplement gives an account of ten exsiccata, three American and the others containing American specimens.

Every student of fungi will feel that he is indebted to the compilers for a valuable service, and one no other botanists were in position to perform so acceptably.

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## NOTES AND NEWS.

PROF. G. C. WITTSTEIN died at Munich on June 1, in his seventy-eighth year.

A CORRESPONDENT of the *Revue Horticole* reports the growth of mistletoe on an old peach tree.

IN THE *Journal of Botany*, for September, R. Miller Christy has a paper entitled "Notes on the botany of Manitoba."

DR. H. MAYR, of the Forestry Institute of the University of Munich, has accepted a professorship in the University of Tokio.

DR. H. VÖCHTING, author of numerous important botanical works, has been made professor of botany at the University of Tübingen.

MR. TOKATURO ITO gives an interesting account, in *Journal of Botany*, of the history of botany in Japan. It is accompanied by a portrait of Ito Keisuke.